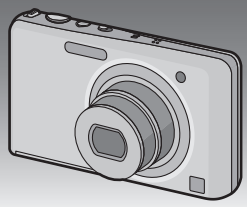
Panasonic

Basic Operating Instructions
Digital Camera

Model No. DMC-FX77

LUMIX



Before use, please read these instructions completely.

More detailed instructions on the operation of this camera are contained in "Operating Instructions for advanced features (PDF format)" in the supplied CD-ROM. Install it on your PC to read it.

Web Site: http://www.panasonic-europe.com

Model number suffix "EB" denotes UK model.

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Dear Customer,

We would like to take this opportunity to thank you for purchasing this Panasonic Digital Camera. Please read these Operating Instructions carefully and keep them handy for future reference. Please note that the actual controls and components, menu items, etc. of your Digital Camera may look somewhat different from those shown in the illustrations in these Operating Instructions.

Carefully observe copyright laws.

- Recording of pre-recorded tapes or discs or other published or broadcast material for purposes other than your own private use may infringe copyright laws. Even for the purpose of private use, recording of certain material may be restricted.

Information for Your Safety

WARNING:

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR PRODUCT DAMAGE,

- **DO NOT EXPOSE THIS APPARATUS TO RAIN, MOISTURE, DRIPPING OR SPLASHING AND THAT NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.**
- **USE ONLY THE RECOMMENDED ACCESSORIES.**
- **DO NOT REMOVE THE COVER (OR BACK); THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.**

THE SOCKET OUTLET SHALL BE INSTALLED NEAR THE EQUIPMENT AND SHALL BE EASILY ACCESSIBLE.

■ Product identification marking

Product	Location
Digital camera	Bottom
Battery charger	Bottom

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Caution for AC mains lead

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug. Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362. Check for the ASTA mark ⓐ or the BSI mark ♆ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

CAUTION!
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as stated below. If in any doubt please consult a qualified electrician.

■ IMPORTANT

The wires in this mains lead are coloured in accordance with the following code: Blue: Neutral, Brown: Live.
As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows: The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue. The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL ⏚ OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF-KEEP DRY.

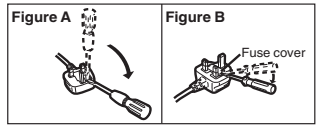
■ Before use

Remove the connector cover.

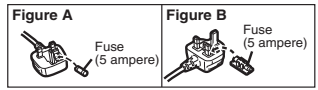
■ How to replace the fuse

The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.
Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.



2. Replace the fuse and close or attach the fuse cover.



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■ About the battery pack

CAUTION
Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

- Do not heat or expose to flame.
- Do not leave the battery(ies) in an automobile exposed to direct sunlight for a long period of time with doors and windows closed.

Warning
Risk of fire, explosion and burns. Do not disassemble, heat above 60 °C or incinerate.

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■ About the battery charger

CAUTION!
- **DO NOT INSTALL OR PLACE THIS UNIT IN A BOOKCASE, BUILT-IN CABINET OR IN ANOTHER CONFINED SPACE. ENSURE THE UNIT IS WELL VENTILATED. TO PREVENT RISK OF ELECTRIC SHOCK OR FIRE HAZARD DUE TO OVERHEATING, ENSURE THAT CURTAINS AND ANY OTHER MATERIALS DO NOT OBSTRUCT THE VENTILATION VENTS.**
- **DO NOT OBSTRUCT THE UNIT'S VENTILATION OPENINGS WITH NEWSPAPERS, TABLECLOTHS, CURTAINS, AND SIMILAR ITEMS.**
- **DO NOT PLACE SOURCES OF NAKED FLAMES, SUCH AS LIGHTED CANDLES, ON THE UNIT.**
- **DISPOSE OF BATTERIES IN AN ENVIRONMENTALLY FRIENDLY MANNER.**

- The battery charger is in the standby condition when the AC power supply cord is connected. The primary circuit is always "live" as long as the power cord is connected to an electrical outlet.

■ Cautions for Use

- Do not use any other AV cables except the supplied one.
- Always use a genuine Panasonic HDMI mini cable (RP-CDHM15, RP-CDHM30; optional).
  Part numbers: RP-CDHM15 (1.5 m) (5 feet), RP-CDHM30 (3.0 m) (10 feet)
- Do not use any other USB connection cables except the supplied one.

Keep this unit as far away as possible from electromagnetic equipment (such as microwave ovens, TVs, video games etc.).
- If you use this unit on top of or near a TV, the pictures and/or sound on this unit may be disrupted by electromagnetic wave radiation.
- Do not use this unit near cell phones because doing so may result in noise adversely affecting the pictures and/or sound.
- Recorded data may be damaged, or pictures may be distorted, by strong magnetic fields created by speakers or large motors.
- Electromagnetic wave radiation generated by microprocessors may adversely affect this unit, disturbing the pictures and/or sound.
- If this unit is adversely affected by electromagnetic equipment and stops functioning properly, turn this unit off and remove the battery or disconnect AC adaptor (DMW-AC5E; optional). Then reinsert the battery or reconnect AC adaptor and turn this unit on.

Do not use this unit near radio transmitters or high-voltage lines.
- If you record near radio transmitters or high-voltage lines, the recorded pictures and/or sound may be adversely affected.

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Information for Users on Collection and Disposal of Old Equipment and used Batteries

These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries should not be mixed with general household waste.
For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points, in accordance with your national legislation and the Directives 2002/96/EC and 2006/66/EC.
By disposing of these products and batteries correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling.
For more information about collection and recycling of old products and batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items.
Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

For business users in the European Union
If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

[Information on Disposal in other Countries outside the European Union]
These symbols are only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.

Note for the battery symbol (bottom two symbol examples):
This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

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Contents

Information for Your Safety 2
Accessories 8
Names of the Components 10
How to Use the Touch Panel 12
Charging the Battery 14
• Charging 14
• Approximate operating time and number of recordable pictures 15
About the Built-in Memory/the Card 16
Inserting and Removing the Card (optional)/the Battery 17
Setting Date/Time (Clock Set) 18
• Changing the Clock Setting 18
Selecting the [Rec] Mode 19
Taking pictures using the automatic function
(iA: Intelligent Auto Mode) 20
• Scene Detection 21
Recording Motion Pictures 22
Playing Back Pictures ([Normal Play]) 23
Deleting Pictures 23
Setting the Menu 24
Taking 3D pictures (3D Photo Mode) 25
Reading the Operating Instructions (PDF format) 26
Specifications 28

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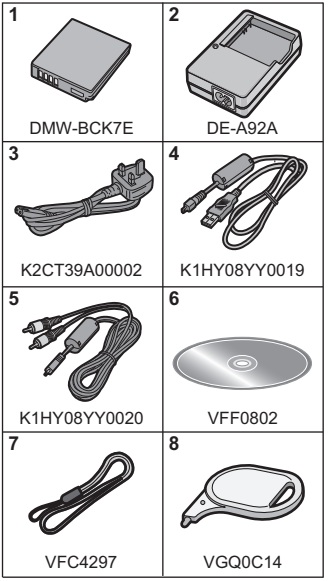
Accessories

Check that all the accessories are supplied before using the camera.
Product numbers correct as of January 2011. These may be subject to change.

1 Battery Pack
(Indicated as **battery pack** or **battery** in the text)
Charge the battery before use.
2 Battery Charger
(Indicated as **battery charger** or **charger** in the text)
3 AC Mains Lead
4 USB Connection Cable
5 AV Cable
6 CD-ROM
- Software:
  Use it to install the software to your PC.
- Operating Instructions

7 Hand Strap
8 Stylus Pen

- SD Memory Card, SDHC Memory Card and SDXC Memory Card are indicated as **card** in the text.
- **The card is optional.**
  You can record or play back pictures on the built-in memory when you are not using a card.
- Consult the dealer or your nearest Service Centre if you lose the supplied accessories. (You can purchase the accessories separately.)



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Sales and Support Information

Customer Care Centre

- For customers within the UK: 0844 844 3852
- For customers within Ireland: 01 289 8333
- Visit our website for product information www.panasonic.co.uk.
- E-mail: customer.care@panasonic.co.uk

Technical Support for AV Software

- For customers within the UK: 0844 844 3869
- For customers within Ireland: 01 289 8333

Direct Sales at Panasonic UK

- For customers: 0844 844 3856
- Order accessory and consumable items for your product with ease and confidence by phoning our Customer Care Centre Monday – Thursday 9.00 a.m. – 5.30 p.m., Friday 9.30 a.m. – 5.30 p.m. (Excluding public holidays)
- Or go on line through our Internet Accessory ordering application at www.pas-europe.com.
- Most major credit and debit cards accepted.
- All enquiries transactions and distribution facilities are provided directly by Panasonic UK Ltd.
- It couldn't be simpler!
- Also available through our Internet is direct shopping for a wide range of finished products, take a browse on our website for further details.

■ Optional Accessories

- Battery Pack
  DMW-BCK7E
- HDMI mini cable:
  RP-CDHM15/RP-CDHM30
- SDXC Memory Card
  64 GB: RP-SDW64GE1K
  48 GB: RP-SDW48GE1K
- SDHC Memory Card
  32 GB: RP-SDW32GE1K/RP-SDQ32GE1K
  24 GB: RP-SDQ24GE1K
  16 GB: RP-SDW16GE1K/RP-SDQ16GE1K/RP-SDN16GE1A
  8 GB: RP-SDW08GE1K/RP-SDQ08GE1K/RP-SDN08GE1A
  4 GB: RP-SDW04GE1K/RP-SDQ04GE1K/RP-SDN04GE1A
- SD Memory Card
  2 GB: RP-SDN02GE1A
- AC Adaptor✳
  DMW-AC5EB
- DC Coupler✳
  DMW-DCC10F

✳ The AC Adaptor (optional) can only be used with the designated Panasonic DC Coupler (optional). The AC adaptor (optional) cannot be used by itself.

Some optional accessories may not be available in some countries.

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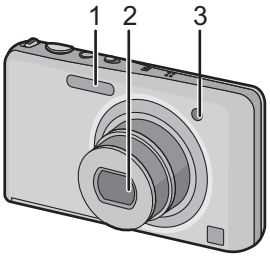
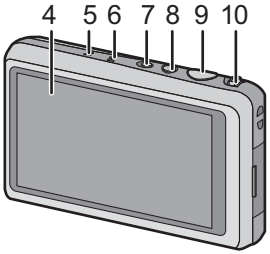
Names of the Components

1 Flash
2 Lens
3 Self-timer indicator
AF Assist Lamp



4 Touch panel/LCD monitor
5 Speaker
6 Microphone
7 Camera ON/OFF switch
8 Motion picture button
9 Shutter button
10 Zoom lever



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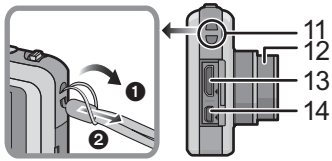
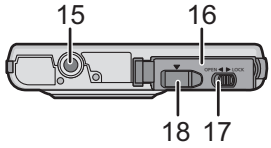
11 Strap eyelet
- Be sure to attach the strap when using the camera to ensure that you will not drop it.

12 Lens barrel
13 [HDMI] socket
14 [AV OUT/DIGITAL] socket



15 Tripod receptacle
16 Card/Battery door
17 Release lever



18 DC coupler cover
- When using an AC adaptor, ensure that the Panasonic DC coupler (DMW-DCC10; optional) and AC adaptor (DMW-AC5E; optional) are used.
- Always use a genuine Panasonic AC adaptor (DMW-AC5E; optional).
- When using an AC adaptor, use the AC Mains Lead supplied with the AC adaptor.
- It is recommended to use a fully charged battery or AC adaptor (DMW-AC5E; optional) and DC coupler (DMW-DCC10; optional) when recording motion pictures.
- If while recording motion pictures using the AC adaptor and the power supply is cut off due to a power outage or if the AC adaptor is disconnected etc., the motion picture being recorded will not be recorded.

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How to Use the Touch Panel

This touch panel is a type that detects pressure.

Touch the screen To touch and release the touch panel.	**Drag** A movement without releasing the touch panel.
Use this to perform tasks such as selecting icons or images displayed on the touch panel. • It may not operate properly when multiple icons are touched simultaneously, so try to touch the centre of the icon.	This is used when performing tasks such as moving to the next image by dragging horizontally, or changing the range of the displayed image. This can also be used to perform tasks such as switching the screen by operating the slide bar.

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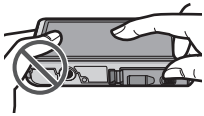
Note



- If you use a commercially available liquid crystal protection sheet, please follow the instructions that accompany the sheet. (Some liquid crystal protection sheets may impair visibility or operability.)
- **Apply a little extra pressure** when touching if you have a commercially available protection sheet affixed or if you feel it is not responding well.
- Touch panel will not operate properly when the hand holding this unit is pressing on the touch panel.
- Do not press using anything with a sharp tip or anything hard, except for the supplied stylus pen.
- Do not operate with your fingernails.
- Wipe the LCD monitor with dry soft cloth when it gets dirty with finger prints and others.
- Do not scratch or press the LCD monitor too hard.

■ About the Stylus pen

It is easier to use the stylus pen (supplied) for detailed operation or if it is hard to operate with your fingers.

- Do not place it where small children can reach.
- Do not place the stylus pen on the LCD monitor when storing. LCD monitor may break when the stylus pen is pressed strongly against the LCD monitor.

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Charging the Battery

■ About batteries that you can use with this unit

The battery that can be used with this unit is DMW-BCK7E.

It has been found that counterfeit battery packs which look very similar to the genuine product are made available to purchase in some markets. Some of these battery packs are not adequately protected with internal protection to meet the requirements of appropriate safety standards. There is a possibility that these battery packs may lead to fire or explosion. Please be advised that we are not liable for any accident or failure occurring as a result of use of a counterfeit battery pack. To ensure that safe products are used we would recommend that a genuine Panasonic battery pack is used.

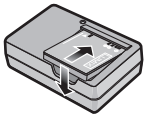
• Use the dedicated charger and battery.

Charging

• The battery is not charged when the camera is shipped. Charge the battery before use.

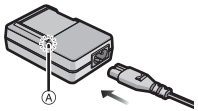
• Charge the battery with the charger indoors.

1 **Attach the battery paying attention to the direction of the battery.**



2 **Connect the AC Mains Lead.**

• Disconnect the charger from the electrical socket and detach the battery after charging is completed.



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■ About the [CHARGE] indicator

The [CHARGE] indicator turns on:
The [CHARGE] indicator Ⓐ is turned on during charging.

The [CHARGE] indicator turns off:
The [CHARGE] indicator Ⓐ will turn off once the charging has completed without any problem.

- **When the [CHARGE] indicator flashes**
  - The battery temperature is too high or too low. It is recommended to charge the battery again in an ambient temperature of between 10 °C to 30 °C (50 °F to 86 °F).
  - The terminals of the charger or the battery are dirty. In this case, wipe them with a dry cloth.

■ Charging time

Charging time	Approx. 120 min

Approximate operating time and number of recordable pictures

Number of recordable pictures	Approx. 200 pictures
Recording time	Approx. 100 min

Recording conditions by CIPA standard
- CIPA is an abbreviation of [Camera & Imaging Products Association].
- Normal Picture Mode
- Temperature: 23 °C (73.4 °F)/Humidity: 50%RH when LCD monitor is on.
- Using a Panasonic SD Memory Card (32 MB).
- Using the supplied battery.
- Starting recording 30 seconds after the camera is turned on. (When the Optical Image Stabilizer function is set to [ON].)
- **Recording once every 30 seconds** with full flash every second recording.
- Changing the zoom magnification from Tele to Wide or vice versa in every recording.
- Turning the camera off every 10 recordings and leaving it until the temperature of the battery decreases.

Playback time	Approx. 150 min

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About the Built-in Memory/the Card

Built-in Memory

- **Memory size: Approx. 70 MB**
- The access time for the built-in memory may be longer than the access time for a card.

Card

The following cards which conform to the SD video standard can be used with this unit. (These cards are indicated as **card** in the text.)

Type of card which can be used with this unit	Remarks
SD Memory Card (8 MB to 2 GB)	• **Use a card with SD Speed Class* with "Class 4" or higher when recording motion pictures in [AVCHD]. Also, use a card with SD Speed Class with "Class 6" or higher when recording motion pictures in [Motion JPEG].** • SDHC Memory Card can be used with SDHC Memory Card or SDXC Memory Card compatible equipment. • SDXC Memory Card can only be used with SDXC Memory Card compatible equipment. • Check that the PC and other equipment are compatible when using the SDXC Memory Cards. **http://panasonic.net/avc/sdcard/information/SDXC.html** • Only the cards with capacity listed left can be used.
SDHC Memory Card (4 GB to 32 GB)	
SDXC Memory Card (48 GB, 64 GB)	

* SD Speed Class is the speed standard regarding continuous writing. Check via the label on the card, etc.

e.g.:

- Please confirm the latest information on the following website.
  http://panasonic.jp/support/global/cs/dsc/
  (This Site is English only.)

Note

- Keep the Memory Card out of reach of children to prevent swallowing.

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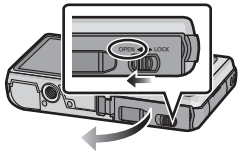
Inserting and Removing the Card (optional)/the Battery

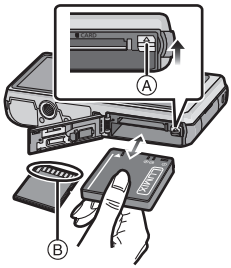
- Check that this unit is turned off.
- We recommend using a Panasonic card.

1 **Slide the release lever in the direction of the arrow and open the card/battery door.**



- **Always use genuine Panasonic batteries (DMW-BCK7E).**
- **If you use other batteries, we cannot guarantee the quality of this product.**

2 **Battery: Being careful about the battery orientation, insert all the way until you hear a locking sound and then check that it is locked by lever Ⓐ.**
Pull the lever Ⓐ in the direction of the arrow to remove the battery.

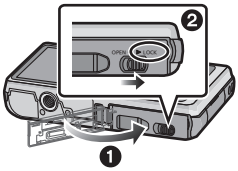


Card: Push it securely all the way until you hear a "click" while being careful about the direction in which you insert it.
To remove the card, push the card until it clicks, then pull the card out upright.

Ⓑ: Do not touch the connection terminals of the card.

3 **❶:Close the card/battery door.**

❷:Slide the release lever in the direction of the arrow.



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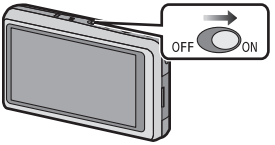
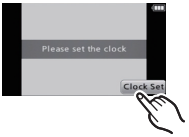
Setting Date/Time (Clock Set)

• The clock is not set when the camera is shipped.

1 **Turn the camera on.**



2 **Touch [Clock Set].**



3 **Touch the items you wish to set (Year/Month/Day/Hours/Minutes), and set using [▲]/[▼].**

- Touch [↩] to cancel the date and time settings without setting a date and time.

4 **Touch [Set] to set.**

5 **Touch [Set] in the confirmation screen.**

Changing the Clock Setting

Select [Clock Set] in the [Rec] or [Setup] menu.

• It can be changed in steps **3** and **4** to set the clock.

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Selecting the [Rec] Mode

1 **Touch [ ].**

2 **Touch the mode icon.**

■ **List of [Rec] Modes**

	Normal Picture Mode
The subjects are recorded using your own settings.	
iA	**Intelligent Auto Mode**
The subjects are recorded using settings automatically selected by the camera.	
SCN	**Scene Mode**
This allows you to take pictures that match the scene being recorded.	
3D	**3D Photo Mode**
Takes a 3D picture.	
	Cosmetic Mode
Takes a picture adjusting the skin texture.	
	My Colour Mode
Use this mode to check colouring effects, select a colour mode from among 8 colour modes, and then take pictures.	

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[Rec] Mode: iA

Taking pictures using the automatic function (iA: Intelligent Auto Mode)

The camera will set the most appropriate settings to match the subject and the recording conditions so we recommend this mode for beginners or those who want to leave the settings to the camera and take pictures easily.

1 **Touch [ ].**

2 **Touch [iA].**

3 **Press the shutter button halfway to focus.**

- The focus indication ① (green) lights when the subject is focused.
- The AF area ② is displayed around the subject's face by the Face Detection function. In other cases, it is displayed at the point on the subject which is in focus.

4 **Press the shutter button fully (push it in further), and take the picture.**

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Scene Detection

When the camera identifies the optimum scene, the icon of the scene concerned is displayed in blue for 2 seconds, after which its colour changes to the usual red.

iA	→	[i-Portrait]	• Only when [iA] is selected
		[i-Scenery]	
		[i-Macro]	
		[i-Night Portrait]	
		[i-Night Scenery]	
		[i-Sunset]	
		[i-Baby]	

- [iA] is set if none of the scenes are applicable, and the standard settings are set.
- When [ ], [ ] or [ ] is selected, the camera automatically detects a person's face, and it will adjust the focus and exposure. **(Face Detection)**

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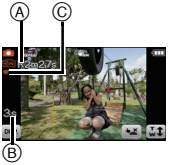
[Rec] Mode:

Recording Motion Pictures

This can record full high definition motion pictures compatible with the AVCHD format or motion pictures recorded in Motion JPEG.
Audio will be recorded in monaural.

1 Start recording by pressing the motion picture button.



Ⓐ Available recording time
Ⓑ Elapsed recording time

- You can record motion pictures fitting each Recording Mode.
- Release the motion picture button right after you press it.
- The recording state indicator (red) Ⓒ will flash while recording motion pictures.

2 Stop the recording by pressing the motion picture button again.

Note

- Motion pictures can be recorded continuously for up to 29 minutes 59 seconds. Also, motion picture recorded continuously in [Motion JPEG] is up to 2 GB. (Example: [8m10s] with [HD]) Remaining time for continuous recording is displayed on the screen.

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[Playback] Mode:

Playing Back Pictures ([Normal Play])

1 Touch [▶].

- The display switches to normal playback.

2 Drag the screen horizontally.

- After selecting the motion picture, touch [▶] to start playback.

[Playback] Mode:

Deleting Pictures

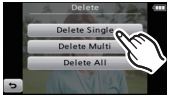
Once deleted, pictures cannot be recovered.

- Pictures on the built-in memory or the card, that are being played back will be deleted.

1 Select the picture to be deleted, and then touch [🗑].

2 Touch [Delete Single].

- Confirmation screen is displayed. Picture is deleted by selecting [Yes].



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Setting the Menu

1 **Touch [MENU].**

2 **Touch the menu icon.**

3 **Touch the menu item.**

- Screen at right is an example of selecting [AF Mode] in [Rec] mode Menu.

4 **Touch the Settings.**

- Depending on the menu item, its setting may not appear or it may be displayed in a different way.
- Screen at right is an example to set the [AF Mode] from [▪] (1-area-focusing) to [👤] (Face Detection).

■ Close the menu

Touch [↩] several times or press the shutter button halfway.

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[Rec] mode: 3D

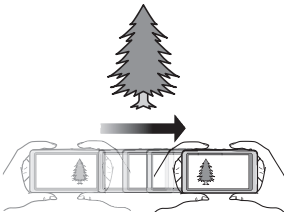
Taking 3D pictures (3D Photo Mode)

Pictures are recorded continuously while moving the camera horizontally, and two picutres selected automatically are combined to make a single 3D picture.
To view 3D pictures, a television that supports 3D is required (This unit will playback in 2D).

1 **Touch [ ].**

2 **Touch [3D].**

- Description of recording method is displayed. To exit, touch [OK].



3 **Press the shutter button once then pan the camera.**

4 **Move the camera horizontally straight from left to right while recording.**

- A guide is displayed while recording.
- Move the camera approximately 10 cm (0.33 feet) within approximately 4 seconds using the guide.

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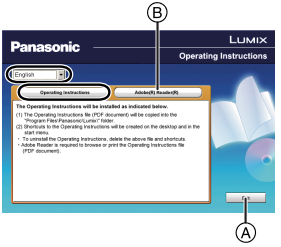
Reading the Operating Instructions (PDF format)

More detailed instructions on the operation of this camera are contained in “Operating Instructions for advanced features (PDF format)” in the supplied CD-ROM. Install it on your PC to read it.

■ **For Windows**

1. **Turn the PC on and insert the CD-ROM containing the Operating Instructions (supplied).**
2. **Click the [Operating Instructions].**
3. **Select the desired language and then click [Operating Instructions] to install.**

   Ⓐ To return to the install menu.
4. **Double click the “Operating Instructions” shortcut icon on the desktop.**


Ⓑ
Panasonic
LUMIX
Operating Instructions
English
Operating Instructions
Adobe(R) Reader(R)
The Operating Instructions will be installed as indicated below.
(1) The Operating Instructions file (PDF document) will be copied into the "Panasonic\Operating Instructions" folder.
(2) Shortcuts to the Operating Instructions will be created on the desktop and in the start menu.
・To uninstall the Operating Instructions, delete the above file and shortcuts.
・Adobe Reader is required to browse or print the Operating Instructions file (PDF document).
Ⓐ

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■ **When the Operating Instructions (PDF format) will not open**

You will need Adobe Acrobat Reader 5.0 or later or Adobe Reader 7.0 or later to browse or print the Operating Instructions (PDF format).
Insert the CD-ROM containing the Operating Instructions (supplied), click Ⓑ and then follow the messages on the screen to install.
(Compatible OS: Windows 2000 SP4/Windows XP SP3/Windows Vista SP2/ Windows 7)

- You can download and install a version of Adobe Reader that you can use with your OS from the following Web Site.
  http://get.adobe.com/reader/otherversions

■ **To uninstall the Operating Instructions (PDF format)**

Delete the PDF file from the “Program Files\Panasonic\Lumix\” folder.
- When the contents in the Program Files folder cannot be displayed, click the [Show the contents of this folder] to display them.

■ **For Macintosh**

1 **Turn the PC on and insert the CD-ROM containing the Operating Instructions (supplied).**

2 **Open the “Manual” folder in the CD-ROM and then copy the PDF file with the desired language inside the folder.**

3 **Double click the PDF file to open it.**

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Specifications

Digital Camera:
Information for your safety

Power Source:	DC 5.1 V
Power Consumption:	1.6 W (When recording) 0.9 W (When playing back)

Camera effective pixels	12,100,000 pixels	
Image sensor	1/2.33″ CCD, total pixel number 12,500,000 pixels, Primary colour filter	
Lens	Optical 5×zoom, f=4.3 mm to 21.5 mm (35 mm film camera equivalent: 24 mm to 120 mm)/F2.5 to F5.9	
Digital zoom	Max. 4×	
Extra optical zoom	Max. 9.8× (When set to 3,000,000 pixels [3M] or less)	
Focus range	Normal	50 cm (1.64 feet) (Wide)/1 m (3.28 feet) (Tele) to ∞
	Macro/ Intelligent auto/ Motion Picture	3 cm (0.10 feet) (Wide)/1 m (3.28 feet) (Tele) to ∞
	Scene Mode	There may be differences in the above settings.
Shutter system	Electronic shutter+Mechanical shutter	

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Burst recording	
Burst speed	Approx. 3.7 pictures/second
Number of recordable pictures	Max. 7 pictures
Hi-speed burst	
Burst speed	Approx. 10 pictures/second (Speed priority) Approx. 6 pictures/second (Image priority)
	[3M (4:3), 2.5M (3:2), 2M (16:9) or 2.5M (1:1) is selected as the picture size.]
Number of recordable pictures	Approx. 15 to 100 pictures
Minimum Illumination	Approx. 6 lx (when i-low light is used, the shutter speed is 1/25th of a second)
Shutter speed	8 seconds to 1/4000th of a second [Starry Sky] Mode: 15 seconds, 30 seconds, 60 seconds
Exposure (AE)	Programme AE Exposure compensation (1/3 EV Step, −2 EV to +2 EV)
Metering mode	Multiple
LCD monitor	3.5″ TFT LCD (16:9) (Approx. 230,000 dots) (field of view ratio about 100%) Touch panel
Flash range	Approx. 60 cm (1.97 feet) to 5.9 m (19.4 feet) (Wide, [ISO AUTO] is set)
Microphone	Monaural
Speaker	Monaural

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Recording media	Built-in Memory (Approx. 70 MB)/SD Memory Card/ SDHC Memory Card/SDXC Memory Card
Recording file format	
Still Picture	JPEG (based on “Design rule for Camera File system”, based on “Exif 2.3” standard)/DPOF corresponding/ MPO
Motion pictures with audio	AVCHD/QuickTime Motion JPEG
Interface	
Digital	“USB 2.0” (High Speed) ∗ Data from the PC can not be written to the camera using the USB connection cable.
Analogue video Audio	NTSC/PAL Composite (Switched by menu) Audio line output (monaural)
Terminal	
[AV OUT/ DIGITAL]	Dedicated jack (8 pin)
[HDMI]	MiniHDMI TypeC
Dimensions (excluding the projecting parts)	Approx. 99.7 mm (W)×55.2 mm (H)×20.6 mm (D) [3.93″(W)×2.17″(H)×0.81″(D)]
Mass	Approx. 142 g/0.32 lb (with card and battery) Approx. 126 g/0.28 lb (excluding card and battery)
Operating temperature	0 °C to 40 °C (32 °F to 104 °F)
Operating humidity	10%RH to 80%RH

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Battery Charger (Panasonic DE-A92A):
Information for your safety

Input:	AC ～ 110 V to 240 V, 50/60 Hz, 0.2 A
Output:	DC ⎓ 4.2 V, 0.43 A

Battery Pack (lithium-ion) (Panasonic DMW-BCK7E):
Information for your safety

Voltage/capacity:	3.6 V/680 mAh

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AVCHD ™ HDMI VIERA Link DOLBY DIGITAL CREATOR QuickTime

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Pursuant to at the directive 2004/108/EC, article 9(2)
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